



Australian Government  
Department of Defence

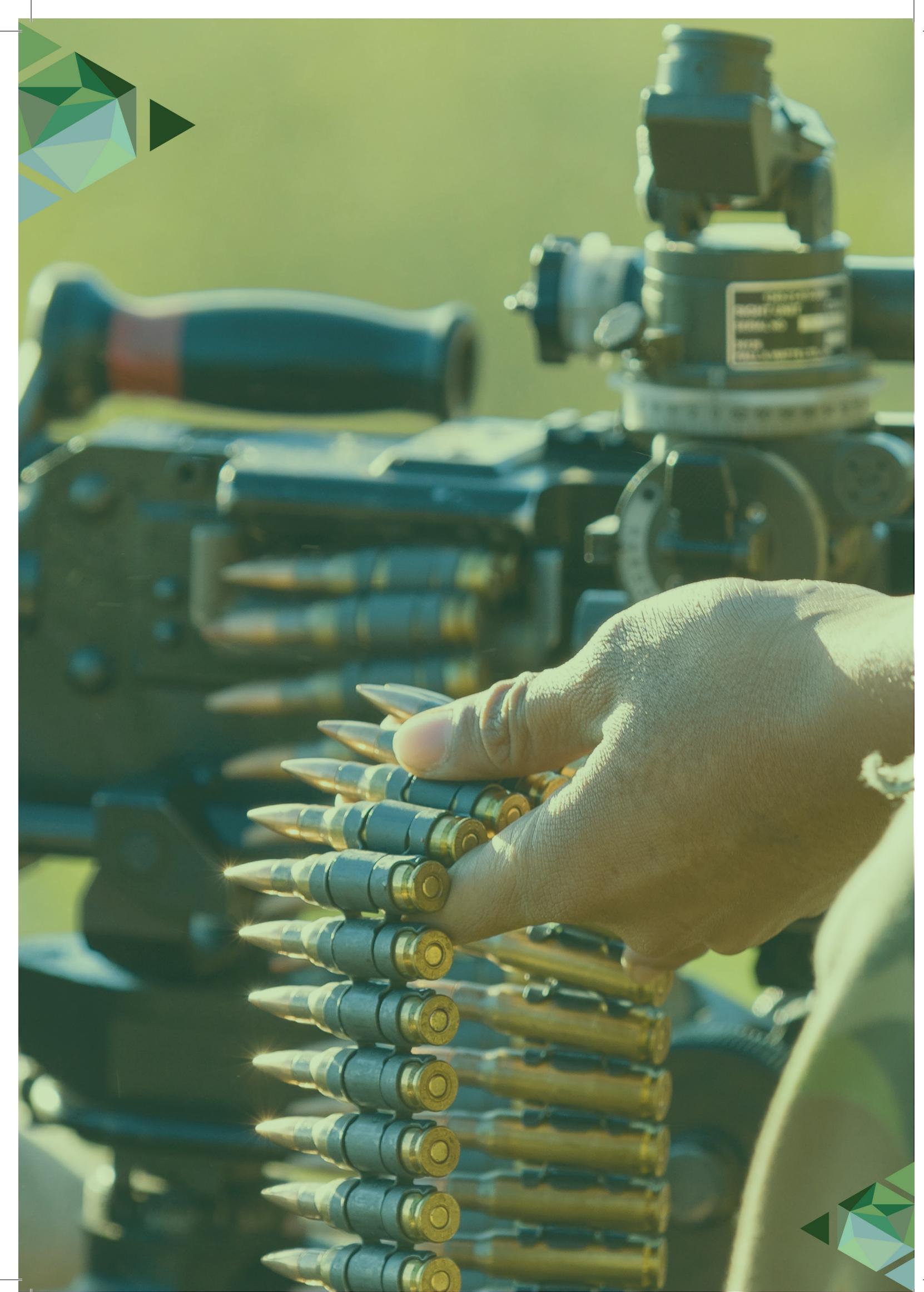


## SOVEREIGN INDUSTRIAL CAPABILITY PRIORITY IMPLEMENTATION PLAN

Munitions and Small Arms Research,  
Design, Development and Manufacture

December 2019





# MUNITIONS AND SMALL ARMS RESEARCH, DESIGN, DEVELOPMENT AND MANUFACTURE

## *Minister's foreword*



The opportunity for Australian industry to participate in Defence projects right now is unprecedented. The Sovereign Industrial Capability Priority Implementation Plans provide a key reference point to industry on the critical areas where Defence is seeking to partner with Australian industry.

This Implementation Plan – the first of ten – is a key part of the Government's \$200 billion investment to build the sovereign capability of our military and defence industry. We are committed to developing a robust, resilient and internationally competitive Australian defence industry base that is better able to help meet Defence's capability requirements.

The release of this Implementation Plan reaffirms the Government's commitment to Australia's manufacturing sector. I encourage Australian industry, especially small businesses, to read this Implementation Plan so Defence and industry can continue partnering to maximise the involvement of Australian industry in delivering critical ADF capabilities.

## A plan for a strong, sustainable and secure industrial capability

This Implementation Plan details the critical industrial capabilities that underpin the Munitions and small arms priority. It is supported by the companion Department of Defence (Defence) Industry Plan, which provides more detail on the industrial base and Government actions listed in this Implementation Plan. The Industry Plan can be found at <https://www.defence.gov.au/SPI/Industry/CapabilityPlan/implementationplans.asp>

The scope of the Munitions and small arms priority includes the following:

- Small Arms – the weapons and corresponding ancillaries carried by the dismounted combatant up to and including Direct Fire Support Weapons; and
- Munitions – the ammunition and munitions<sup>1</sup>; including their component parts, used in weapons carried by the dismounted combatant, as well as grenades, demolition charges, artillery, mortars and aircraft bombs<sup>2</sup>; and the supporting ecosystem elements that enable these capabilities to be integrated, tested and operated.

It is only by successfully leveraging Australian industry's know-how will the ADF be able to fight and win in all domains.

**The Hon Melissa Price MP**  
Minister for Defence Industry

<sup>1</sup> While these terms are often used interchangeably, ammunition is a term that includes; shells, bullets, fuses, and powder, and munition involves everything from guns, small revolvers, medium rifles, automatic rifles, special arms, artillery guns, missiles, and bombs.

<sup>2</sup> This priority only applies to the bomb body – typically the explosive components of the munitions, not the guidance and control kits that can be attached to the bomb bodies for precision guidance.



## Critical Industrial Capabilities

Within this environment six industrial capabilities will be critical. Government seeks to have access to or control over certain elements of each, and to support or influence defence industry investment. Each of these critical industrial capabilities ensure the most critical elements are available when and where they are needed by the Australian Defence Force (ADF).

### 1 WEAPON SYSTEM INTEGRATION

Integrated weapon system research and design and the ability to upgrade / reconfigure systems, utilising advanced ancillaries and lighter-weight components.

### 2 PRECISION SPECIALIST MACHINING

Precision specialist machining, treatments and coatings of components utilising advanced lightweight materials to support the assembly and sustainment of small arms and ancillaries.

### 3 PRODUCTION OF ENERGETIC MATERIEL

Development and manufacture of Energetic Materiel, including high explosives, propellants and primers, using current technologies and future alternatives.

### 4 LOAD, ASSEMBLE AND PACK CAPABILITY

The ability to fill and Load, Assemble and Pack designated Explosive Ordnance products inclusive of handling high explosive fill and use of advanced / lightweight components and parts.

### 5 TEST AND EVALUATION

Test, evaluation and experimentation capabilities to facilitate weapon system research, design, development and modification, including experimentation of munitions.

### 6 COMBAT TRAINING TECHNOLOGIES

Design and development of training technologies and environments, incorporating digital and autonomous capabilities and synthetic immersive systems, to enhance combatant performance.

## Enabling the Critical Industrial Capabilities

To ensure Australia retains the identified critical industrial capabilities, by 2025, the Government seeks to build the following enabling capabilities in partnership with industry, starting with the Government actions on page 6:

- Munitions Production Facilities: Continued Commonwealth control of the Government Owned Contractor Operated explosives and munitions factories, as key enablers of sovereignty.
- Weapon System Performance: Access to the Intellectual Property (IP) and skilled resources required to design, integrate, test and evaluate weapon system performance. This focus on ancillaries and platform integration is linked to warfighting advantage.
- Software Systems and Data: The ADF's increasing focus on digital capabilities and networking requires a level of access to Intellectual Property and other input data needed to operate and integrate weapons-centric software systems, and control over the data generated when operating these systems. This extends to replicating the physical attributes and performance metrics of ADF small arms and munitions technologies for use in combat training simulations and enabling the collection and dissemination of data collected during training activities and exercises.

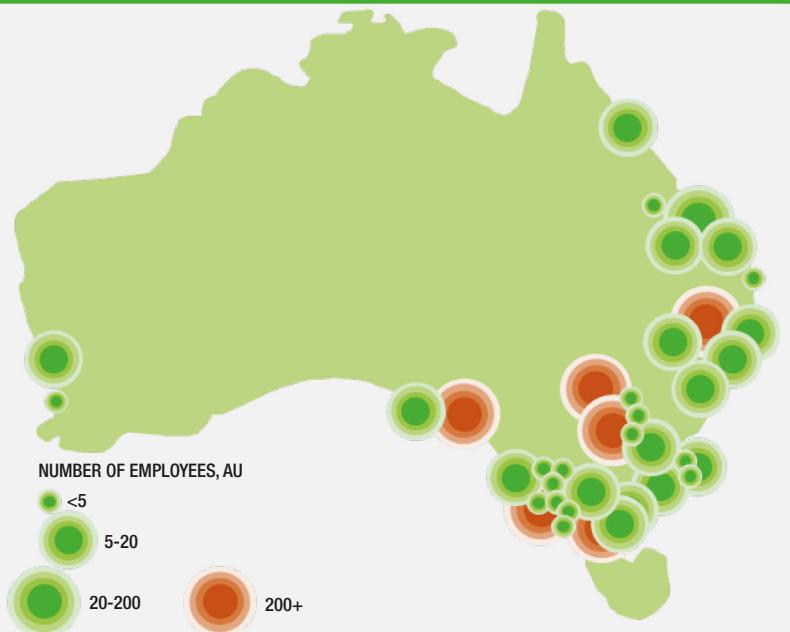
## Industry Consultation

Defence engaged a cross-section of the Australian industrial base when developing this Plan. Industry, academia and research organisations representing all critical industrial capabilities and all parts of the value chain were engaged.

 **50** ORGANISATIONS ENGAGED



\* 4 organisations are out of scope for this Priority



## The segment at a glance

The industrial base supporting the development and production of small arms and munitions technologies in Australia is mature and stable, driven in part by limited technological change and steady ADF buying patterns over recent decades. The market is dominated by a small number of major manufacturers and assemblers. The market also consists of a small number of second and third tier providers and a large number of companies acting as agents, resellers and importers. The ADF is the key customer to many of the companies in this market.

## Government actions

This Implementation Plan includes the following actions to be taken by Defence to support this priority. Although responsibility has been attributed to a particular branch, group or agency, it is expected that a broader group of Government stakeholders will participate in, or contribute to, an action. Funding of the Government actions will be taken from existing departmental funding.



Topic	Action	Responsible	Timeframe	Key Performance Indicators
Explosive Ordnance (EO) Collaboration Program	Defence will consider the creation of a collaborative munitions learning and development program that brings together Defence, industry and academia to deliver a common Defence objective.	Joint Capabilities Group	Mapping of Defence requirements no later than July 2020. Next meeting February 2020, set agenda items for 2020 and forward work for two years.  Agenda items established for industry and academia input into Defence capability development focus areas.  Critical Industrial Capabilities utilised to ensure investment and forward work alignment with Munitions and small arms priority.	Research, Development, Test and Evaluation (RDT&E) Sub-Committee established. Mapping of Defence requirements, to inform a forward work program and agenda.  Industry and academia access provided where applicable.
Access to Specialist Test Facilities	Defence will explore mechanisms that enable industry greater access to Defence test facilities to assist with research and development and prototyping activities.	Joint Capabilities Group	Feasibility study completed – August 2020. Decision agreed – December 2020. Infrastructure build commence – July 2023. Full Operational Capability – June 2025.  As required.	Feasibility study commenced. Options paper developed for decision. Investment plan developed. Construction / investment commenced. Operating model endorsed.  Industry access provided.
Establishment of a Professionalisation Framework for the Explosive Sector	Provide industry access to the Combat Application Lab, which was recently established within Army Headquarters as part of the Soldier Combat System Program. The Lab will provide a platform for industry to engage with end users and subject matter experts across the Defence portfolio, including Defence Science and Technology Group, Capability Acquisition and Sustainment Group and Capability Manager representatives.	Army Headquarters	Sector Study – 2020. Industry skills plan development – 2021. Implementation – 2022.	Literature review and sector study completed. Development of National EO Industry Skills Strategy completed. Skills strategy implemented.
Increasing Access to Defence User Communities	Defence will engage with the Institute of Explosives Engineers and the Sector Skills Strategy Group in the United Kingdom with the view to develop an Australian Explosives Professionalisation Framework that leverages the key learnings from the United Kingdom.	Joint Capabilities Group	Capability Acquisition and Sustainment Group Army Headquarters	Continued engagement by industry at events such as Land Environment Working Group, Army Demo Day and Army Innovation Day.
Reformed Defence Industry Security Program (DISP)	Defence will provide opportunities to industry through increased access to ADF personnel and other Defence representatives to obtain feedback on developmental equipment related to this priority.	Associate Secretary Group	Ongoing.	Increase in number of DISP members.
National Firearms Manufacturing License/ Permit	Defence will continue implementing the reformed DISP to strengthen security practices in partnership with industry.  DISP supports industry to protect their interests from threats including foreign interference, and increases opportunities to compete for work with Defence and international partners by becoming 'Defence Ready'.  Defence provides DISP members with access to security information, guidance and services, including personnel security vetting, certification and accreditation of facilities and/or ICT systems. In certain circumstances, Defence can also provide an assurance to international partners of an entity's DISP membership, promoting Australia's sovereign capability internationally.  More information on DISP can be found at <a href="https://www.defence.gov.au/dsvs/industry/default.asp">https://www.defence.gov.au/dsvs/industry/default.asp</a>	Law Enforcement Policy Branch, Department of Home Affairs	Prior to the next meeting of the Ministerial Council for Police and Emergency Management.	Officials identify and provide advice to Ministers on changes to licensing and other requirements to provide greater national consistency for small businesses manufacturing small arms weapons and components.

Topic	Action	Responsible	Timeframe	Key Performance Indicators
Identification and Communication of Priorities for Australian Manufacture	<p>Alongside the development of the domestic munitions manufacturing capability strategy, Defence will undertake a supply chain assessment to identify those components and natures of ordnance which could, should or must be manufactured in Australia in order to protect Australia's sovereign interests and assure lines of supply.</p>	Joint Capabilities Group	<p>Domestic Manufacturing narrative drafted with Defence Explosive Ordnance Committee sign off due – February 2020.</p> <p>Mapping of Defence requirements – April 2020.</p>	<p>An assessment as part of JP 2085 EO Contingency Stock Surety Project, a 30 year-long project valued at over \$1.2 billion. This assessment will assure the supply of critical components and capabilities through initiatives ranging from targeted investments in the industrial base through to stockpiling, dependent on the risk profile.</p> <p>Mapping of Defence requirements, to inform a forward work program and future policy development.</p>
A Clear Vision for Domestic Munitions Manufacturing	<p>At the highest level, Government's requirement for domestic munitions manufacturing is to enable capability delivery for the ADF, providing responsiveness and surety of supply when needed, while also supporting the growth, productivity and competitiveness of the Australian industrial base.</p> <p>Defence and Government will align and promote a long term strategic vision and provide the required investment to enable the use of the facilities to be optimised and generate greater return on investment.</p> <p>Alongside the refinement of this strategic vision, Defence will also map its EO requirements for the next ten years to assist in evaluating and approving enabling investment cases, to support price negotiations and the determination of manufacturing requirements.</p>	Joint Capabilities Group	<p>Domestic Manufacturing narrative submitted to Defence EO Committee – February 2020.</p> <p>Policy development and review – 2020.</p>	<p>A long term strategic vision to enable more effective use of Defence munitions facilities.</p> <p>A map of Defence's EO requirements for the next ten years.</p>
Explosive Ordnance Governance and Coordination	<p>Defence will introduce an enhanced EO Governance Framework that includes processes and practices to enable the realisation of the domestic munitions manufacturing vision.</p>	Joint Capabilities Group	<p>Defence EO Committee established with quarterly meetings.</p> <p>Force Structure Plan 2019 Guided Weapons and Explosive Ordnance Program Governance Framework submitted to Investment Committee for sign off – July 2020.</p>	<p>An enhanced decision making framework, for Project and Capability Managers to use, that supports an increased understanding of the pathway to, and options for, local manufacture and assembly of munitions via Committee led approach with sub-committees to discuss specific agendas such as domestic manufacturing.</p> <p>The establishment of prompts in the acquisition process for EO and capabilities that use EO.</p>
Engineering Development Program	<p>Defence will explore options for the development of an engineering development stream or program. This will focus on students and graduates with an interest and appropriate qualifications to support a career in the Defence sector focused specifically on explosive technologies. This program will leverage the Defence Industry Internship Program.</p>	Industry Partners Coordinated by Defence Industry Policy Division	Ongoing.	<p>Increase in the number of Defence Industry Internship Program participants in the explosive technologies sector.</p>
Opportunities for industry participation in the future of training	<p>Defence will ensure regular communication with industry, working collaboratively to understand the risks and opportunities presented by future Joint Force training objectives to leverage the unique knowledge base and experience of the Australian industrial base in refining the vision and potential capability solutions.</p>	Joint Capabilities Group	<p>Defence EO Committee established with quarterly meetings.</p> <p>Workforce and Training sub-committee to look specifically at agenda item.</p> <p>Sector Study – 2020.</p> <p>Industry skills plan development – 2021.</p>	<p>Literature review and sector study completed.</p> <p>Development of National Explosive Ordnance Industry Skills Strategy completed.</p> <p>Skills strategy implemented.</p> <p>Defence EO Committee and sub-committee agenda to review activities.</p>
Intellectual Property	<p>Defence will develop guidance for industry on best practice regarding IP, including hints and tips for working with Defence and the range of existing IP strategies and requirements.</p>	Strategic Policy and Intelligence Group	Q4 2020.	Delivery of the guidance material.



Please direct any questions on the Sovereign Industrial Capability Priority policy or the information contained in this Implementation Plan to:

[defence.icp@defence.gov.au](mailto: defence.icp@defence.gov.au)